

**What is claimed is:**

1        A wireless LAN system comprising:

      a plurality of communications networks connected to  
5       each other;

      wireless base stations for periodically transmitting a  
      signal within a wireless cell, at least one of said  
      wireless base stations being disposed in each of said  
      networks;

10      a mobile terminal for transmitting, when newly  
      receiving said signal, a belonging request to a wireless  
      base station which has transmitted said signal and  
      connecting, when receiving permission for belonging from  
      said wireless base station, said mobile terminal to said  
      wireless base station, thus conducting communications; and

15      agents each for distributing an agent advertisement  
      onto said communications networks and managing, after  
      said mobile terminal receives said agent information, the  
      location of said mobile terminal based on movement  
      information transmitted from said mobile terminal, each  
      of agents being disposed in each of said communications  
      networks;

20      each of said base stations storing said agent  
      information based on said agent advertisement distributed  
      onto said communications network, receiving a belonging  
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request from said mobile terminal, and transmitting, when belonging of said mobile terminal is permitted, said agent information to said mobile terminal to be stored, together with said permission for belonging.

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2       The system defined in Claim 1, wherein said agent information comprises said agent advertisement.

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3       The system defined in Claim 2, wherein said wireless base station comprises:

an agent advertisement filtering circuit for filtering signals on said communications networks and then extracting said agent advertisement;

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an agent advertisement memory for storing an agent advertisement output from said agent advertisement filtering circuit;

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a cable network interface circuit for monitoring an agent advertisement distributed on said communications networks and outputting said signals on said communications networks into said agent advertisement filtering circuit;

a wireless transmission/reception circuit for being an interface circuit that connects said wireless base station to said mobile terminal by wireless;

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a transmission/reception switching circuit for changing

said wireless transmission/reception circuit to a transmission mode or a reception mode;

an agent advertisement transmission circuit for reading, when receiving a notice from said mobile terminal saying that a belonging request has been received, said agent advertisement from said agent advertisement memory, and then transmitting said notice to said mobile terminal via said wireless transmission/reception circuit and via said transmission/reception switching circuit; and

10 a terminal belonging management circuit for notifying, when detecting receiving a belonging request from said mobile terminal, said agent advertisement transmission circuit of the reception.

15 4 The system defined in Claim 1, wherein said agent information contains at least an IP address of said agent.

5 The system defined in Claim 4, wherein said wireless base station comprises:

20 a memory for storing said agent information set via said communications networks using a SNMP;

a cable network interface circuit for outputting said agent information received, to said memory;

a wireless transmission/reception circuit being an interface circuit that connects said wireless base

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station to said mobile terminal by wireless;  
a transmission/reception switching circuit for  
switching said wireless transmission/reception circuit to  
a transmission mode or a reception mode;  
5 a transmission circuit for reading, when receiving a  
notice from a mobile terminal saying that a belonging  
request has been received, said agent advertisement from  
said memory, and then transmitting said notice to said  
mobile terminal via said wireless transmission/reception  
10 circuit and via said transmission/reception switching  
circuit; and  
a terminal belonging management circuit for notifying,  
when detecting receiving a belonging request from said  
mobile terminal, said transmission circuit of the  
15 reception.

6 The system defined in Claim 1, wherein said mobile  
terminal comprises:

a wireless transmission/reception circuit being an  
20 interface circuit that connects said mobile terminal to  
said wireless base stations by wireless;  
a transmission/reception switching circuit being a  
circuit that switches said wireless  
transmission/reception circuit to a wireless transmission  
25 mode or a wireless reception mode;

a belonging processing circuit for transmitting, when receiving a notice saying that signals periodically transmitted from a wireless base station have been detected, a belonging request to said wireless base  
5 station via said wireless transmission/reception circuit and via said transmission/reception switching circuit; and

10 a base station decision circuit being a circuit that detects signals periodically transmitted from a wireless base station belonging to a self station, said base station detection circuit judging, when said signals are not detected, that said self station has moved outside the radio cell of said wireless base station and notifying, when signals periodically transmitted from  
15 other wireless base station are detected, said belonging processing circuit of the detection.

7 The system defined in Claim 6, wherein said mobile terminal comprises:

20 an agent connection processing circuit for transmitting, when receiving a notice saying that reception of said agent information has been detected, a movement notice for said agent to a wireless base station via said wireless transmission/reception circuit and via said  
25 transmission/reception switching circuit; and

an agent advertisement reception circuit being a  
circuit that detects reception of said agent information,  
said agent advertisement reception circuit notifying,  
when detecting reception of said agent information, said  
5 agent connection processing circuit of the detection, and  
outputting a request for changing the network setting of  
a terminal connected to said mobile terminal based on  
said agent information, to a network setting changing  
circuit of said terminal.

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8       A method of controlling a wireless LAN system, said  
wireless LAN system including a plurality of  
communications networks connected to each other; base  
stations communications for periodically sending signals  
15 within a wireless cell, at least one of said base  
stations being disposed in each of networks; a mobile  
terminal for transmitting, when newly receiving said  
signals, a belonging request to a base station which has  
sent said signals, and connecting, when receiving  
20 permission for belonging from said wireless base station,  
said mobile terminal to said wireless base station, thus  
conducting communications; and agents each for  
distributing an agent advertisement onto said  
communications networks and managing, the location of  
25 said mobile terminal based on a movement notice

transmitted from said mobile terminal after said mobile terminal receives said agent information, each of agents being disposed in each of said communications networks; said method comprising the steps of:

5       storing said agent information into each of said base stations, based on said agent advertisement distributed on said communications network; and

10      when each of said wireless base stations receives a belonging request from said mobile terminal and permits belonging of said mobile terminal, transmitting said agent information to be stored to said mobile terminal from each of said wireless base stations, together with said permission for belonging.